

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A method of measuring a displacement of an optical axis of an optical microscope having an illumination optical system and a projection optical system, the method comprising:

a step of irradiating an evaluation mark having diffraction grating patterns formed on a substrate with illumination light by way of the illumination optical system and observing the evaluation mark by way of the projection optical system to obtain a brightness of an image of an area of the evaluation mark, the area including the diffraction grating patterns; and

a step of measuring the displacement of the optical axis based upon the relationship between the brightness of [[an]] the image of the area of the evaluation mark and a direction of the diffraction grating patterns of the evaluation mark.

2. (Previously presented) The method of measuring the displacement of the optical axis according to claim 1, wherein

the evaluation mark is composed of at least two gratings connected together and arranged in series with each other, each having parallel bars that extend in a direction different from those of any other grating.

3. (Original) The method of measuring the displacement of the optical axis according to claim 1, wherein

normal light of the illumination light is blocked at the position of the pupil of the projection optical system.

4. (Original) The method of measuring the displacement of the optical axis according to claim 2, wherein

diffracted light of the illumination light is blocked at the position of the pupil of the projection optical system.

5. (Original) The method of measuring the displacement of the optical axis according to claim 1, wherein

a plurality of beams of diffracted light produced by the diffraction grating patterns are blocked asymmetrically at the position of the pupil of the projection optical system relative to normal light of the illumination light by the substrate.

6. (Original) The method of measuring the displacement of the optical axis according to claim 2, wherein

a plurality of beams of diffracted light produced by the diffraction grating patterns are blocked asymmetrically at the position of the pupil of the projection optical system relative to normal light of the illumination light from the substrate.

7. (Original) The method of measuring the displacement of the optical axis according to claim 1, wherein

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diffracted light is generated by the diffraction grating patterns with asymmetrically differentiated intensity relative to normal light.

8. (Original) The method of measuring the displacement of the optical axis according to claim 2, wherein

diffracted light is generated by the diffraction grating patterns with asymmetrically differentiated intensity relative to normal light.

9. (Previously presented) An optical microscope comprising:

an illumination optical system through which illumination light to be applied to an evaluation mark passes;

a projecting optical system through which the illumination light reflected from the evaluation mark passes; and

a removable and rotatable shield means provided at a pupil of the projection optical system and having a shield area, the shield area being asymmetric relative to normal light of the illumination light from a substrate.

10. (Original) The optical microscope according to claim 9, wherein the evaluation mark is formed on the substrate.

11. (Original) The optical microscope according to claim 9, wherein the evaluation mark is formed on the stage for carrying the substrate.

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12. (Withdrawn) An evaluation mark comprising:
a substrate; and
diffraction gratings formed on the substrate and adapted to asymmetrically generate diffracted light when irradiated with light.
13. (Withdrawn) The evaluation mark according to claim 12, wherein the diffraction gratings show a saw-blade like cross section.
14. (Withdrawn) The evaluation mark according to claim 12, wherein the diffraction gratings show a stepped cross section of a plurality of steps.
15. (New) The method of measuring the displacement of the optical axis according to claim 1, wherein the diffraction grating patterns each have dimensions less than or close to a resolution limit of the optical microscope.